Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Preparation for International Telecommunication Union World Radiocommunication Conferences	)	IC Docket No. 94-31

ORIGINAL

COMMENTS

AT&T Corp. ("AT&T") respectfully submits the following comments in response to the Commission's Second Notice of Inquiry ("SNOI"), FCC 95-36, released January 31, 1995.

The SNOI seeks comment on the Commission's preliminary recommendations for United States proposals for the 1995 World Radiocommunication Conference ("WRC-95") and on new agenda items for WRC-97, WRC-99 and beyond. Given the Commission's strong interest in achieving additional spectrum and rule changes facilitating the implementation of Mobile Satellite Services ("MSS") at WRC-95, AT&T regards the Commission's preliminary recommendations as appropriate to that end, with few exceptions. In addition, AT&T urges that the United States propose a worldwide allocation of 5000-5250 MHz for mobile service to accommodate high-speed

wireless data ("HSWD") services be included in the WRC-97 agenda.

The SNOI notes (¶ 53) that in order to implement the currently proposed MSS systems, sufficient suitable spectrum must be found for MSS feeder links. The SNOI goes on (¶¶ 54-55) to request comment on the candidate bands in Table 2, including the information therein on the feasibility of sharing with the Fixed Satellite Service ("FSS") either in the same direction or in the opposite direction (called reverse-band working or "RBW"). Table 2 states that co-directional sharing between MSS and FSS is not feasible in the 10.7-10.95 GHz and 11.2-11.45 GHz bands, but that RBW is feasible in those bands. Accordingly, pages 7-8 of Appendix 1 to the SNOI contain a Commission preliminary draft proposal allocating those bands to RBW MSS feeder links in the Earth to space direction.

Although RBW between MSS and FSS may be feasible in those bands, they are not suitable for MSS feeder links because they are heavily occupied by terrestrial fixed services. Table 2 and Appendix 1, although noting the presence of fixed services in those bands, ignore the harmful interference that would occur if MSS feeder links were permitted therein. According to AT&T's database, which it uses to coordinate microwave radio routes, there are

thousands of fixed microwave paths in the 10.7-10.95 GHz and 11.2-11.45 GHz bands.[1] Therefore, the Commission should urge that the United States not propose use of those bands for MSS feeder links.

AT&T's final point regarding the Commission's efforts to facilitate MSS concerns the power-flux density ("PFD")[2] limits proposed for the 6825-7075 MHz and 12.75-13.25 GHz bands in MOD 2567 and MOD 2575 on pages 16 and 17 of Appendix 1 to the SNOI. Those provisions contain a limit on angles 0° to 5° and another limit on angles 5° to 90°. Which limit applies at precisely 5° is entirely unclear. Moreover, the sharp change in the permitted level of interference at the 5° break point is not implementable in practice by satellite transmitters. The receiving antennas of some terrestrial receivers will look at the satellite at a low angle but will not receive interference only at that angle. Rather, they will actually receive additional interference at the higher level permitted for higher angles. There are no such rapid changes in PFD limits

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[1] Because these bands are heavily used by terrestrial fixed services, ITU-R Recommendation SF 1005 would require the satellite to transmit at unacceptably low power levels to avoid interference with those services.

[2] PFD is a metric applicable to emissions from satellites for the purpose of protecting terrestrial services from harmful interference.

anywhere else in the Radio Regulations. The PFD limits in the 6825-7075 MHz and 12.75-13.25 GHz bands should change gradually as the angle of arrival changes, as occurs elsewhere in the Radio Regulations.[3]

Turning from WRC-95 to future WRCs, the SNOI notes (¶ 95) that AT&T seeks an allocation in the 5.2 GHz band for mobile services on a worldwide basis to accommodate HSWD systems. As the SNOI notes (fn.151), this AT&T recommendation also appears in the Interim Report of the FCC Industry Advisory Committee for WRC-95 ("IAC"). That Interim Report briefly summarizes AT&T's explanation of the need for spectrum for HSWD systems to support the explosive growth in demand for mobile communications for data applications. As AT&T noted, the increased freedom of action for computer users available from HSWD systems will help to increase productivity and improve education and health care. Moreover, because similar spectrum allocations are already available in Europe, a uniform worldwide allocation will foster the competitiveness of United States industry in world markets.

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[3] E.g. RR 2566 and RR 2574. Moreover, this gradual approach exists in RR 2578 which the Commission proposes to change (SNOI, Appendix 1, p. 17) but not in this respect.

For want of time, the IAC merely recited in its Interim Report AT&T's recommendation and those by several other parties, but did not endorse any of them. AT&T expects, however, that the Final IAC Report will affirmatively support AT&T in this regard and will elaborate on the justification for that proposal. Accordingly, at WRC-95 the Commission should propose that the WRC-97 agenda contain an item allocating 5000-5250 MHz to mobile services.

The Commission's proposed changes to MOD 796 appearing on page 3 of Appendix 1 to the SNOI are consistent with AT&T's proposed allocation of 5000-5250 MHz to mobile services in support of HSWD service. That MOD gives microwave landing systems ("MLS") precedence over other uses at 5030-5091 MHz; provides that expansion of MLS into the 5000-5030 MHz band should occur only if the 5030-5091 MHz band cannot satisfy MLS needs; and states that MLS can also operate in the 5091-5120 MHz band after January 1, 2015, if the two lower bands cannot meet the need.

AT&T understands that MLS will be deployed in the United States in only a small number of airports, rather than in the thousands previously contemplated. Thus, the MLS spectrum specified in MOD 796 should be sufficient to support the intended deployment. Moreover, the Commission's proposal regarding MOD 796 leaves room for HSWD services

between 5120 and 5250 MHz and makes it possible to deploy non-nomadic HSWD systems in the 5000-5120 MHz band in areas not near airports using MLS systems.

Respectfully submitted,

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Dated: March 6, 1995